

**WHAT IS CLAIMED IS:**

1. A system for management and control of manufacturing processes using an operator workstation comprising:

a manufacturing control and management engine that receives plural types of data from manufacturing and information systems, said application integration platform processing plural types of data to generate manufacturing management and control data for display on the workstation;

a data store containing instructions set for the management and control of manufacturing data and storing manufacturing and control data; and

a graphical user interface that interfaces with said application integration platform and data store to provide a visual display and control over manufacturing processes using the plural types of data.

2. The system as recited in claim 1, wherein the manufacturing control and management engine further communicates with other cooperating manufacturing systems comprising any of enterprise resource planning systems, planning and scheduling systems, supplies systems, engineering systems, and quality systems to obtain the plural types of data.

3. The system as recited in claim 2, wherein the manufacturing control and management engine communicates with the other cooperating manufacturing systems over a communications infrastructure.

4. The system as recited in claim 1, wherein said graphical user interface further provides reports generated in response to user inputs, said user inputs including at least one of: a range of dates, a range of times, a selection of work station, a selection of work center, a selection of work unit, and an employee identifier.

5. The system as recited in claim 4, wherein the graphical user interface further provides controls to participating users to directly control one or more manufacturing resources.

6. The system as recited in claim 5, wherein a work in progress analysis is provided.
7. A system for visually displaying and providing control over manufacturing processes using an operator workstation, comprising:
  - a manufacturing management and control engine that receives plural types of data from manufacturing and information systems within an enterprise via a network infrastructure and analyzes said plural types of data in response to user inputs;
  - a database containing said manufacturing data; and
  - a user interface that displays processed plural types of data to identify manufacturing process status and operations,wherein the user interface further comprises controls to allow participating users to directly communicate instructions to cooperating manufacturing resources.
8. The system as recited in claim 7, wherein the manufacturing control and management engine communicates with the other cooperating manufacturing systems over a communications infrastructure.
9. The system as recited in claim 7, wherein said graphical user interface further provides reports generated in response to user inputs, said user inputs including at least one of: a range of dates, a range of times, a selection of work station, a selection of work center, a selection of work unit, and an employee identifier.
10. The system as recited in claim 8, wherein the communications infrastructure comprises any of a fixed wire LAN, a wireless LAN, a fixed wire WAN, a wireless WAN, a fixed wire peer-to-peer network, a wireless peer-to-peer network, the Internet, and the wireless Internet.
11. The system as recited in claim 9, wherein the graphical user interface comprises a plurality of display areas capable of displaying one or more features of a manufacturing process.

12. The system as recited in claim 11, wherein the features comprise status information, operator information, materials information, and job progress information.

13. The system as recited in claim 7, wherein the data store is central data repository receiving data from a plurality of cooperating manufacturing systems.

14. The system as recited in claim 7, further comprising a real time control system that couples the graphical user interface with cooperating manufacturing resources, allowing the graphical user interface to have some control over the cooperating manufacturing resource.

15. A method of visually displaying bottleneck information in an enterprise manufacturing system, said method comprising:

obtaining manufacturing management and control data from cooperating manufacturing systems and manufacturing resources;

storing said manufacturing management and control data in a database containing information related to manufacturing processes to be performed in a manufacturing environment; and

presenting manufacturing management and control data to participating users through a graphical user interface, the graphical user interface capable of controlling cooperating manufacturing resources responsive to received data.

16. The method as recited in claim 15, further comprising establishing communications with cooperating manufacturing systems and manufacturing resources.

17. The method as recited in claim 16, further comprising obtaining from cooperating manufacturing systems data relevant to manufacturing processes to be performed in a manufacturing environment.

18. The method as recited in claim 17, further comprising initiating control over a cooperating manufacturing resource.

19. The method as recited in claim 18, further comprising receiving operational data from an operating manufacturing resource about the status of the manufacturing resource for display on the graphical user interface.

20. The method as recited in claim 20, further comprising modifying the operation of the cooperating manufacturing resources depending on the received operational data.